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WENDEROTH, LIND & PONACK, L.L.P.  
2033 K STREET N. W.  
SUITE 800  
WASHINGTON, DC 20006-1021

EXAMINER
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MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/742,386

Applicant(s)

KIMURA ET AL.

Examiner

Karla Moore

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-35,63,69,70,72 and 95-107 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-35,63,69,70,72 and 95-107 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. **Claims 27, 31, 95 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,267,853 to Dordi et al. (1). in view of U.S. Patent No. 6,231,428 to Maloney et al. and U.S. Patent No. 6,309,981 to Mayer et al.**

4. Dordi et al. (1) disclose a semiconductor substrate processing apparatus in Figure 3, substantially as claimed and comprising: a carry-in and carry-out section (210; column 5, rows 20) for carrying in and carrying out a semiconductor substrate having a surface on which a circuit is formed, the apparatus is capable of carrying in and out in a dry state by using spin/rinse/dry station (212; column 5, row 24); a plated metal/electroplating film forming unit

Art Unit: 1763

(240; column 5, rows 41-46) for forming a plated metal film on said semiconductor substrate which has been carried in; a bevel etching unit (one of modules 236; column 9, rows 1-6 and column 19, rows 5-10 and 48-50) for etching a peripheral edge portion of said semiconductor substrate; and a transport mechanism (216) for transporting said semiconductor substrate between said units. The processing apparatus of Dordi et al. (1) may further comprise an annealing unit (211; column 5, row 20) for annealing said semiconductor substrate. The processing apparatus of Dordi et al. (1) may further comprise a cleaning and drying unit for cleaning and drying said semiconductor substrate (one of modules 238; column 9, rows 1-6 and column 19, rows 5-10) and electroless plating cells (215; column 12, rows 20-21) capable of forming a seed layer on said semiconductor substrate or reinforcing a seed layer on a substrate. Further, one of the electroplating units (240) could be used as a cover plating unit for forming a plated cover layer on said semiconductor substrate. The apparatus also comprises a liquid supply equipment having a liquid plating tank (220, column 20, rows 51-59). Dordi et al. (1) also teach that different fluids may be provided to the wafer surfaces and that the wafer is also capable of rotation/spin drying (column 8, rows 24-47).

5. Dordi et al. (1) disclose the invention substantially as claimed and as described above.

6. However, Dordi et al. (1) fail to explicitly teach the use of separate handling mechanisms for substrates in wet and dry states.

7. Maloney et al. teach the use of separate handling mechanisms for wafers in wet and dry states for the purpose of using a separate mechanism for dry (clean) wafers (column 19, rows 11-30). This avoids contamination.

8. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided separate mechanism for wet and dry wafers in Dordi et al. (1) in order to avoid contamination by transferring dry (clean) substrates and wet substrates separately as taught by Maloney et al.

Art Unit: 1763

9. With respect to claims 31 and 99, treatment in said plated film forming unit is performed with said semiconductor held by a substrate holding portion (Figure 6, 450; column 5, rows 45-47).

10. Additionally, the process(es) performed in the plated metal film forming unit, depending on the processing material supplied (column 21, rows 7-20) any number of processes could be performed. The courts have ruled that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). The courts have further ruled that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969).

11. Dordi et al. (1) and Maloney et al. disclose the invention substantially as claimed and as described above. Including providing a nozzle at the center of a wafer in the bevel etching unit of Dordi et al. (1) for rinsing the wafer.

12. However, Dordi et al. (1) fail to teach the nozzle capable of supplying (operable to supply) an acid solution or as a central fluid discharge member connected to a source of acid such that acid is supplied from the acid source to the central fluid discharge member and then to the center portion of the wafer located in the bevel etch unit.

13. Mayer et al. teach providing a nozzle capable of supplying (operable to supply) an acid solution/a central fluid discharge member (Figure 2A, 250) connected to a source of acid (246) such that acid is supplied from the acid source to the central fluid discharge member and then to the center portion of the wafer located in the bevel etch unit for the purpose of performing an acid rinse that removes residual material and aid in overall cleaning (column 8, rows 1-19).

Art Unit: 1763

14. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a nozzle capable of supplying (operable to supply) an acid solution/central fluid discharge member connected to a source of acid such that acid is supplied from the acid source to the central fluid discharge member and then to the center portion of the wafer located in the bevel etch unit in Dordi et al. (1) and Maloney et al. in order to perform an acid rinse that removes residual material and to aid in overall cleaning as taught by Mayer et al.

**15. Claims 28 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dordi et al. (1) Maloney et al. and Mayer et al. as applied to claims 27, 31, 95 and 99 and further in view of U.S. Patent No. 5,083,364 to Olbrich et al.**

16. Dordi et al. (1), Maloney et al. and Mayer et al. disclose the invention substantially as claimed and as described above.

17. However, Dordi et al. (1), Maloney et al. and Mayer et al. fail to disclose said plated metal film forming unit, said bevel etching unit and said annealing unit are interchangeable.

18. Olbrich et al. disclose a multi-chamber semiconductor manufacturing apparatus with interchangeable process module for the purpose of connection modules depending on purpose, thus allowing for assembly and modification of the apparatus to meet various needs which leads to increased productivity while reducing the proportionate expense (column 1, rows 27-33 and 46-57).

19. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided interchangeable modules in Dordi et al. (1), Maloney et al. and Mayer et al. in order to connect modules depending on purpose, thus allowing for assembly and modification of the apparatus to meet various needs which leads to increased productivity while reducing the proportionate expense as taught by Olbrich et al.

Art Unit: 1763

20. **Claims 29 and 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dordi et al. (1), Maloney et al. and Mayer et al. as applied to claims 27, 31, 95 and 99 above, in view of U.S. Patent No. 5,310,410 to Begin et al. and U.S. Patent No. 5,083,364 to Olbrich et al.**

21. Dordi et al. (1), Maloney et al. and Mayer et al. disclose the invention substantially as claimed and as described above.

22. However, Dordi et al. (1), Maloney et al. and Mayer et al. fail to teach the apparatus may further comprise a film thickness measuring instrument and/or a detection sensor for measuring and/or detecting a film thickness of a film and/or surface state of a film formed on said semiconductor substrate.

23. Begin et al. teach that an inspection unit may be included as part of a cluster apparatus for the purpose of determining whether a substrate or a portion of the apparatus is defective (column 4, rows 48-54).

24. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an inspection unit in Dordi et al. (1), Maloney et al. and Mayer et al. in order to determine whether a substrate or a portion of the apparatus is defective as taught by Begin et al.

25. Dordi et al. (1), Maloney et al., Mayer et al. and Begin et al. disclose the invention substantially as claimed and as described above.

26. However, Dordi et al. (1), Maloney et al., Mayer et al. and Begin et al. fail to teach the processing units are interchangeable.

27. Olbrich et al. disclose a multi-chamber semiconductor manufacturing apparatus with interchangeable process module for the purpose of connection modules depending on purpose, thus allowing for assembly and modification of the apparatus to meet various needs which leads

Art Unit: 1763

to increased productivity while reducing the proportionate expense (column 1, rows 27-33 and 46-57).

28. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided interchangeable modules in Dordi et al. (1), Maloney et al., Mayer et al. and Begin et al. in order to connect modules depending on purpose, thus allowing for assembly and modification of the apparatus to meet various needs which leads to increased productivity while reducing the proportionate expense as taught by Olbrich et al.

29. **Claims 30 and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dordi et al. (1), Maloney et al., Mayer et al., Begin et al. and Olbrich et al. as applied to claims 29 and 97 above, and further in view of U.S. Patent No. 6,084,419 to Sato et al.**

30. Dordi et al. (1), Maloney et al., Mayer et al., Begin et al. and Olbrich et al. disclose the invention substantially as claimed and as described above.

31. However, over Dordi et al. (1), Maloney et al., Mayer et al., Begin et al. and Olbrich et al. fail to teach said film thickness measuring unit may have an alignment function for said semiconductor substrate.

32. Sato et al. disclose the use of an alignment function for use with an inspection unit (e.g film thickness measuring unit) for the purpose of aligning a substrate with the inspection probes (column 1, rows 26-37).

33. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the film thickness measuring unit in Dordi et al. (1), Maloney et al., Mayer et al., Begin et al. and Olbrich et al. in order to align a substrate with the inspection probes as taught by Sato et al.



Art Unit: 1763

34. **Claims 32-35 and 100-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dordi et al. (1), Maloney et al. and Mayer et al. as applied to claims 27, 31, 95 and 99 above, in view of U.S. Patent Publication No. 2002/0157960 A1 to Dordi et al. (2).**

35. Dordi et al. (1), Maloney et al. and Mayer et al. disclose the invention substantially as claimed and as described above.

36. However, Dordi et al. (1), Maloney et al. and Mayer et al. fail to teach said plated film forming unit comprises a substrate holding portion for holding said semiconductor substrate such that a surface to be plated faces upward, an anode disposed above a surface to be plated, a cathode electrode for passing an electric current in contact with said substrate, and performs plating using a plating liquid in a space formed between said surface to be plated and said anode (claim 32). Dordi et al. further fail to teach said plated metal film forming unit is capable of raising and lowering said semiconductor substrate so as to correspond to respective operating conditions (claim 33). Nor do Dordi et al. (1) disclose said plated film forming unit is capable sealing said peripheral edge portion of said surface to be plated of said semiconductor wafer in an watertight manner (claim 34) or a pure water supply nozzle capable of simultaneously cleaning said semiconductor substrate and said cathode (claim 35).

37. Dordi et al. (2) disclose an plated film forming unit comprising: a substrate holding portion (Figure 4, 204; paragraph 38) for holding said semiconductor substrate such that a surface to be plated faces upward, an anode (230; paragraph 38) disposed above a surface to be plated, a cathode electrode (210; paragraph 38) for passing an electric current in contact with said substrate, and performs plating using a plating liquid in a space formed between said surface to be plated and said anode. Dordi et al. teach said plated metal film forming unit is capable of raising and lowering (paragraph 75) said semiconductor substrate so as to correspond to respective operating conditions. Dordi et al. (1) disclose said plated film forming

Art Unit: 1763

unit is capable sealing said peripheral edge portion of said surface to be plated (paragraph 59) of said semiconductor wafer in an watertight manner or a pure water supply nozzle capable of simultaneously cleaning said semiconductor substrate and said cathode. The plated film forming unit is constructed as described for the purpose of constructing a reliable and fast electroplating apparatus capable of delivering uniform power distribution to a substrate surface and capable of providing uniform deposition on a substrate surface (paragraph 13).

38. It would have been obvious to one of ordinary skill in the art at the time the Applicants's invention was made to have provided a plated film forming unit as described above in Dordi et al. (1), Maloney et al. and Mayer et al. in order to construct a reliable and fast electroplating apparatus capable of delivering uniform power distribution to a substrate surface and capable of providing uniform deposition on a substrate surface as taught by Dordi et al. (2).

39. Examiner notes that with respect to the recitations drawn to properties of the processing fluid (e.g. plating liquid impregnated material comprising a water retaining material), the courts have ruled that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969).

**40. Claims 63 and 104 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,267,853 to Dordi et al. (1) in view of U.S. Patent No. 6,161,054 to Rosenthal and U.S. Patent No. 6,309,981 to Mayer et al.**

41. Dordi et al. (1) disclose a semiconductor substrate processing apparatus substantially as claimed in Figure 3, comprising: a carry-in and carry-out section (210; column 5, rows 20) for carrying in and carrying out a semiconductor substrate having a surface on which a circuit is formed, the apparatus is capable of carrying in and out in a dry state by using spin/rinse/dry station (212; column 5, row 24); a plated metal film forming unit (240; column 5, rows 41-46) for

Art Unit: 1763

forming a plated metal film on said semiconductor substrate which has been carried in; an annealing unit (211; column 5, row 20) for annealing said semiconductor substrate; and a transport mechanism (216) for transporting said semiconductor substrate between said units.

The processing apparatus of Dordi et al. (1) may further comprise a cleaning unit for cleaning said semiconductor substrate (one of modules 238; column 9, rows 1-6 and column 19, rows 5-10); and a liquid supply equipment (220; column 20, rows 51-64) having a plating liquid tank.

Dordi et al. (1) also teach that different fluids may be provided to the wafer surfaces and that the wafer is also capable of rotation/spin drying (column 8, rows 24-47).

42. However, Dordi et al. (1) fail to teach the apparatus may further comprise a film thickness measuring instrument and/or a detection sensor for measuring and/or detecting a film thickness of a film and/or surface state of a film formed on said semiconductor substrate.

43. However, Dordi et al. (1) fail to teach a film thickness measuring station operable to measure a film thickness of said plated metal film formed on said semiconductor substrate in order to adjust plating time or a polishing time; and a recording means for recording results of measurement of the film thickness measured with said film thickness measuring section in order to utilize the recorded data for controlling processing time of a subsequent step and as data for judging a state of each processing step.

44. Rosenthal et al. teach the use of a film thickness measuring station (Figure 2, 22) wherein measurements are recorded and are used to adjust a subsequent processing time for the purpose of enabling the production of higher quality products with tighter specifications at lower cost and with reduced scrap (column 1, row 64 through column 2, row 28; column 3, rows 48-51 and column 6, rows 7-8).

45. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a film thickness measuring station wherein measurements are recorded and used to adjust subsequent processing times in Dordi et al. (1) in order to

Art Unit: 1763

enable the production of higher quality products with tighter specifications at lower cost and with reduced scrap as taught by Rosenthal.

46. Dordi et al. (1), Maloney et al. and Rosenthal et al. disclose the invention substantially as claimed and as described above. Including providing a nozzle at the center of a wafer in the bevel etching unit of Dordi et al. (1) for rinsing the wafer.

47. However, Dordi et al. (1), Maloney et al. and Rosenthal et al. fail to teach the nozzle capable of supplying (operable to supply) an acid solution or as a central fluid discharge member connected to a source of acid such that acid is supplied from the acid source to the central fluid discharge member and then to the center portion of the wafer located in the bevel etch unit.

48. Mayer et al. teach providing a nozzle capable of supplying (operable to supply) an acid solution/a central fluid discharge member (Figure 2A, 250) connected to a source of acid (246) such that acid is supplied from the acid source to the central fluid discharge member and then to the center portion of the wafer located in the bevel etch unit for the purpose of performing an acid rinse that removes residual material and aid in overall cleaning (column 8, rows 1-19).

49. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a nozzle capable of supplying (operable to supply) an acid solution/central fluid discharge member connected to a source of acid such that acid is supplied from the acid source to the central fluid discharge member and then to the center portion of the wafer located in the bevel etch unit in Dordi et al. (1), Maloney et al. and Rosenthal et al. in order to perform an acid rinse that removes residual material and to aid in overall cleaning as taught by Mayer et al.

Art Unit: 1763

50. With respect to claim 71, the courts have ruled that The mere duplication of parts has no patentable significance unless a new and unexpected result is produced. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). The courts have also ruled that the mere rearrangement of parts which does not modify the operation of a device is prima facie obvious. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

**51. Claims 69, 70, 72 and 105-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dordi et al. (1) in view of U.S. Patent Publication No. 2002/0157960 A1 to Dordi et al. (2).**

52. Dordi et al. (1) disclose the invention substantially as claimed in Figure 3 and comprising: a semiconductor substrate processing apparatus, comprising: a carry-in and carry-out section (210; column 5, rows 20) for carrying in and carrying out a semiconductor substrate having a surface on which a circuit is formed, the apparatus is capable of carrying in and out in a dry state by using spin/rinse/dry station (212; column 5, row 24); a plated metal film forming unit (240; column 5, rows 41-46) for forming a plated metal film on said semiconductor substrate which has been carried in; a bevel etching unit (one of modules 236; column 9, rows 1-6 and column 19, rows 5-10 and 48-50) for etching a peripheral edge portion of said semiconductor substrate; and a transport mechanism (216) for transporting said semiconductor substrate between said units.

53. However, Dordi et al. (1) fail to teach said plated film forming unit comprises a substrate holding portion for holding said semiconductor substrate such that a surface to be plated faces upward, an anode disposed above a surface to be plated, a cathode electrode for passing an electric current in contact with said substrate, and performs plating using a plating liquid in a space formed between said surface to be plated and said anode. Dordi et al. further fail to teach said plated metal film forming unit is capable of raising and lowering said semiconductor

Art Unit: 1763

substrate so as to correspond to respective operating conditions. Nor do Dordi et al. (1) disclose said plated film forming unit is capable sealing said peripheral edge portion of said surface to be plated of said semiconductor wafer in an watertight manner or a pure water supply nozzle capable of simultaneously cleaning said semiconductor substrate and said cathode.

54. Dordi et al. (2) disclose an plated film forming unit comprising: a substrate holding portion (Figure 4, 204; paragraph 38) for holding said semiconductor substrate such that a surface to be plated faces upward, an anode (230; paragraph 38) disposed above a surface to be plated, a cathode electrode (210; paragraph 38) for passing an electric current in contact with said substrate, and performs plating using a plating liquid in a space formed between said surface to be plated and said anode. Dordi et al. teach said plated metal film forming unit is capable of raising and lowering (paragraph 75) said semiconductor substrate so as to correspond to respective operating conditions. Dordi et al. (1) disclose said plated film forming unit is capable sealing said peripheral edge portion of said surface to be plated (paragraph 59) of said semiconductor wafer in an watertight manner or a pure water supply nozzle capable of simultaneously cleaning said semiconductor substrate and said cathode. The plated film forming unit is constructed as described for the purpose of constructing a reliable and fast electroplating apparatus capable of delivering uniform power distribution to a substrate surface and capable of providing uniform deposition on a substrate surface (paragraph 13).

55. It would have been obvious to one of ordinary skill in the art at the time the Applicants's invention was made to have provided a plated film forming unit as described above in Dordi et al. (1) in order to construct a reliable and fast electroplating apparatus capable of delivering uniform power distribution to a substrate surface and capable of providing uniform deposition on a substrate surface as taught by Dordi et al. (2).

56. Examiner notes that with respect to the recitations drawn to properties of the processing fluid (e.g. plating liquid impregnated material comprising a water retaining material), the courts

Art Unit: 1763

have ruled that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969).

57. Examiner also notes that the courts have ruled that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). The combination of Dordi et al. (1) and Dordi et al. (2) would be capable of supplying cleaning water at a middle position as desired, if an intended method dictated. There are not structural differences between the prior art and the claimed invention.

58. With respect to claims 105-107, as described above, Dordi et al. (2) describe an apparatus capable of raising and lowering to a plurality of positions and stopping to perform processing thereat.

### ***Response to Arguments***

59. Claims 27 and 63

60. The rejections of these claims have been modified in accordance with Applicant's newly submitted claims

61. Claim 32

59. Applicant's amendments to the claim do not change the fact that the plating fluid is still considered a material present in the apparatus during an intended use. The apparatus could be used with other materials. The plating fluid is not part of the apparatus. As previously pointed out, the courts have ruled that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969).

Art Unit: 1763

62. Claims 69, 70 and 72

63. In response to applicant's argument that these claims recite that cleaning water is supplied to the substrate at a middle position, it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

64. As described above, the combination of Dordi et al. (1) and Dordi et al. (2) would be capable of supplying cleaning water at a middle position as desired, if an intended method dictated. There are not structural differences between the prior art and the claimed invention.

***Conclusion***

65. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

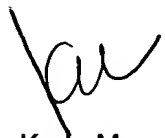
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.



Art Unit: 1763

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Karla Moore  
Primary Examiner  
Art Unit 1763  
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